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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,279	08/16/2000	Yogesh S. Sanghvi	ISIS-4407	3043

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EXAMINER

EPPS FORD, JANET L

ART UNIT	PAPER NUMBER
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1635

19

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/640,279

Applicant(s)

SANGHVI ET AL.

Examiner

Janet L. Epps-Ford, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 5-30-03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 22-26 and 28-34 is/are rejected.
- 7) ☒ Claim(s) 2-21, 27, and 35-41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Response to Arguments***

2. Claims 1, 22-26, and 28-34 remain rejected under 35 USC 102(b) as being anticipated by Caruthers et al. (US 5,750,666), for the reasons of record set forth in the Official Action mailed 4-09-03.

3. Applicant's arguments filed 5-30-03 have been fully considered but they are not persuasive. Applicants traverse the instant rejection on the grounds that Caruthers et al. does not disclose every element of the presently claimed invention. In particular Applicants argue that Caruthers et al. do not expressly nor inherently disclose a method of synthesizing an oligomer wherein an extended compound is treated in a single step with a mixture comprising both an oxidizing reagent and a capping reagent. Contrary to Applicant's assertions, as stated in the prior Office Action, Caruthers et al. disclose a method for synthesizing phosphorodithioate linkages, wherein this process comprises the use of dialkylaminothionucleoside phosphines in the coupling reaction, and after the coupling step the resulting extended oligomer was treated with sulfurizing agent comprising 5% elemental sulfur in a mixture of carbon disulfide/ pyridine/ triethylamine, carbon disulfide in pyridine was then added to remove the excess sulfurizing agent (col. 53, lines 21-30). First, it is noted that during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." (See MPEP § 2111 [R-1]) Therefore, since the concluding step of the method recited in claim 1, does not require that oxidation and capping occur in a single step, claim 1 is interpreted as encompassing

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wherein mixtures comprising reagents that are considered useful in steps that result in either oxidation or capping, would be considered to anticipate the claimed invention. For example, the triethylamine, and the pyridine recited in the mixture used to sulfurize (i.e. oxidize) the extended compound in Caruthers et al., can be considered reagents used in a capping reaction, i.e. capping reagents, see page 50, lines 2-10. Therefore, the mixture used to treat the extended compound of Caruthers et al. comprising a sulfurizing agent in a mixture of carbon disulfide/ pyridine/ triethylamine, is considered to anticipate the instant invention since this mixture comprises an oxidizing agent (i.e. elemental sulfur), and reagents used in a capping reaction, namely pyridine and triethylamine. Applicant's arguments do not take the place of evidence that reagents that are typically used in a capping or oxidizing step could not be interpreted in light of the disclosure, as encompassing "a capping reagent", or "an oxidizing reagent." Claims 1, 22-26, and 28-34 remain rejected for the reasons of record.

#### ***Conclusion***

4. Claims 2-21, 27, and 35-41 are free of the prior art or any combination thereof. Claims 2-21, 27, and 35-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Epps-Ford, Ph.D. whose telephone number is 703-308-8883. The examiner can normally be reached on Monday-Thursday, 8:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John L. LeGuyader can be reached on 703-308-0447. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Janet L. Epps-Ford, Ph.D.  
Examiner  
Art Unit 1635

JLE  
August 7, 2003

  
KAREN LACOURCIERE  
PATENT EXAMINER

KAREN LACOURCIERE  
PATENT EXAMINER